Inventors: Gianfranco COLOMBO et al.

Attorney Docket No.: 07040.0223

Response to Final Office Action issued November 9, 2010

**AMENDMENTS TO THE CLAIMS:** 

The following listing of claims will replace all prior versions and listings of claims

in the application. Please cancel claims 119-121 without prejudice or disclaimer, as

follows:

Claims 1-59 (Canceled).

60. (Previously Presented) A tyre for a vehicle wheel, comprising:

a tread band;

wherein the tread band comprises a tread-band pattern,

wherein the tread-band pattern comprises:

at least two circumferential portions, at least one of the circumferential

portions comprising a first geometric module, wherein the first geometric module

comprises:

an elongated ridge; and

at least two shoulder blocks;

wherein the at least two circumferential portions are disposed in axial side-by-

side relationship;

wherein the first geometric module is repeated along a circumferential extension

direction of the tyre,

wherein the elongated ridge is bounded by two grooves oblique to the

circumferential extension direction,

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wherein the elongated ridge is divided into a plurality of intermediate blocks with respect to an axial extension direction of the tread band,

wherein the intermediate blocks are bounded by a plurality of cuts substantially transverse to the elongated ridge;

wherein the at least two shoulder blocks are associated with the elongated ridge, wherein the at least two shoulder blocks are circumferentially aligned along a side edge of the tread band,

wherein the at least two shoulder blocks are bounded by grooves oriented substantially transversely to the circumferential extension direction,

wherein at least one circumferential shoulder groove separates the elongated ridge from the at least two shoulder blocks,

wherein each intermediate block defines a substantially trapezoidal shape, wherein the plurality of cuts comprises first and second cuts,

wherein the first cuts are substantially perpendicular to the circumferential extension direction, and

wherein the second cuts are substantially perpendicular to the oblique grooves.

61. (Previously Presented) The tyre of claim 60, further comprising: at least one circumferential groove separating the at least two circumferential portions.

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62. (Previously Presented) The tyre of claim 61, wherein the at least one circumferential groove separating the at least two circumferential portions is spaced

apart from an equatorial plane of the tyre.

63. (Previously Presented) The tyre of claim 60, wherein the oblique grooves

have an inclination included between 15° and 35° relative to the circumferential

extension direction.

64. (Previously Presented) The tyre of claim 60, wherein the substantially

transverse grooves have an inclination included between 75° and 105° relative to the

circumferential extension direction.

Claims 65 and 66 (Canceled).

67. (Previously Presented) The tyre of claim 60, wherein the elongated ridge

comprises a swollen axially internal end, comprising:

at least two center blocks circumferentially aligned with each other.

68. (Previously Presented) The tyre of claim 67, wherein each center block

comprises a substantially trapezoidal shape.

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69. (Previously Presented) The tyre of claim 67, wherein the center blocks are

bounded by substantially transverse cuts converging into a circumferential separating

groove interposed between the at least two circumferential portions.

70. (Previously Presented) The tyre of claim 60, wherein the at least two

shoulder blocks comprise a same circumferential size.

71. (Previously Presented) The tyre of claim 60, wherein the at least two

shoulder blocks comprise different circumferential sizes.

72. (Previously Presented) The tyre of claim 60, wherein the at least two

shoulder blocks associated with a first elongated ridge comprise different circumferential

sizes than the at least two shoulder blocks associated with a second elongated ridge

circumferentially adjacent to the first elongated ridge.

73. (Previously Presented) The tyre of claim 60, wherein the elongated ridge

comprises:

an axially external end;

wherein the axially external end is substantially in axial alignment with one of the

at least two shoulder blocks.

74. (Previously Presented) The tyre of claim 73, wherein the axially external end

comprises:

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an end block;

wherein the end block comprises a substantially trapezoidal shape.

75. (Previously Presented) The tyre of claim 73, wherein the first geometric

module comprises:

an auxiliary block disposed circumferentially close to the axially external end.

76. (Previously Presented) The tyre of claim 75, wherein the auxiliary block is

substantially in axial alignment with one of the at least two shoulder blocks.

77. (Previously Presented) The tyre of claim 75, wherein the auxiliary block is

bounded by first and second branches of one of the oblique grooves, and

wherein each branch opens into one of the substantially transverse grooves.

78. (Previously Presented) The tyre of claim 77, wherein each of the first and

second branches is substantially in alignment with one of the substantially transverse

grooves.

79. (Previously Presented) The tyre of claim 75, wherein the auxiliary block

comprises a substantially trapezoidal shape.

80. (Previously Presented) The tyre of claim 76, wherein the shoulder block

substantially in axial alignment with the axially external end comprises a circumferential

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size greater than a circumferential size of the shoulder block substantially in axial

alignment with the auxiliary block.

81. (Previously Presented) The tyre of claim 76, wherein the shoulder block

substantially in axial alignment with the axially external end comprises a circumferential

size smaller than a circumferential size of the shoulder block substantially in axial

alignment with the auxiliary block.

82. (Canceled).

83. (Previously Presented) The tyre of claim 60, wherein the first and second

cuts are disposed in an alternating sequence along a major extension direction of the

elongated ridge.

84. (Previously Presented) The tyre of claim 60, wherein the tread-band pattern

further comprises:

a plurality of sipes.

85. (Previously Presented) The tyre of claim 84, wherein the sipes are formed

on the first geometric module in a mainly axial extension.

86. (Previously Presented) The tyre of claim 84, wherein each sipe comprises a

sawtoothed profile.

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87. (Previously Presented) The tyre of claim 84, wherein the tread-band pattern

further comprises:

a plurality of connecting notches between the sipes.

88. (Previously Presented) The tyre of claim 60, wherein each shoulder block

comprises:

a first series of sipes;

wherein the sipes of the first series comprise a sawtoothed profile, and

wherein the sipes of the first series are disposed parallel to each other according

to an extension substantially parallel to the substantially transverse grooves.

89. (Previously Presented) The tyre of claim 60, wherein each intermediate

block comprises:

a second series of sipes;

wherein the sipes of the second series comprise a sawtoothed profile, and

wherein the sipes of the second series are disposed parallel to each other in a

mainly axial extension.

90. (Previously Presented) The tyre of claim 67, wherein each center block

comprises:

a third series of sipes;

wherein the sipes of the third series comprise a sawtoothed profile, and

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wherein the sipes of the third series are disposed parallel to each other in a mainly axial extension.

91. (Previously Presented) The tyre of claim 73, wherein the axially external end comprises:

an end block;

wherein the end block comprises a substantially trapezoidal shape,

wherein the first geometric module comprises:

an auxiliary block disposed circumferentially close to the axially external end;

wherein each end block and each auxiliary block comprises:

a fourth series of sipes;

wherein the sipes of the fourth series comprise a sawtoothed profile, and wherein the sipes of the fourth series are disposed parallel to each other according to an extension substantially parallel to the substantially transverse grooves.

- 92. (Previously Presented) The tyre of claim 60, wherein the oblique grooves each run in an extension of one of the substantially transverse grooves.
- 93. (Withdrawn) The tyre of claim 60, wherein the tread-band pattern further comprises:

a second circumferential portion;

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wherein the second circumferential portion comprises a second geometric module repeated along the circumferential extension direction,

wherein the second geometric module comprises:

a second elongated ridge; and

at least two second shoulder blocks;

wherein the second elongated ridge is bounded by two second grooves oblique to the circumferential extension direction,

wherein the second elongated ridge is divided into a plurality of second intermediate blocks with respect to the axial extension direction,

wherein the second intermediate blocks are bounded by a plurality of second cuts substantially transverse to the second elongated ridge;

wherein the at least two second shoulder blocks are associated with the second elongated ridge,

wherein the at least two second shoulder blocks are circumferentially aligned along a second side edge of the tread band, and

wherein the at least two second shoulder blocks are bounded by second grooves oriented substantially transversely to the circumferential extension direction.

- 94. (Withdrawn) The tyre of claim 93, wherein the second oblique grooves converge towards the oblique grooves of the first geometric module.
- 95. (Withdrawn) The tyre of claim 93, wherein the second oblique grooves are substantially parallel to the oblique grooves of the first geometric module.

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96. (Withdrawn) The tyre of claim 93, wherein the first geometric module is

circumferentially offset relative to the second geometric module.

97. (Previously Presented) The tyre of claim 60, wherein the tread-band pattern

comprises a second circumferential portion, comprising:

a plurality of third shoulder blocks; and

a plurality of inner blocks;

wherein the third shoulder blocks are circumferentially aligned along a second

side edge of the tread band,

wherein the third shoulder blocks are bounded by third grooves oriented

substantially transversely to the circumferential extension direction,

wherein the plurality of inner blocks are distributed along at least one

circumferential row separated from the third shoulder blocks by a second circumferential

shoulder groove, and

wherein the inner blocks are bounded by fourth grooves oriented substantially

transversely to the circumferential extension direction.

98. (Previously Presented) The tyre of claim 97, wherein the second

circumferential portion of the tread-band pattern further comprises:

a first circumferential row of inner blocks; and

a second circumferential row of inner blocks;

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wherein the first circumferential row of inner blocks is disposed in axial side-by-

side relationship with the second circumferential row of inner blocks, and

wherein the first circumferential row of inner blocks is separated from the second

circumferential row of inner blocks by a second circumferential groove.

99. (Previously Presented) The tyre of claim 97, wherein the third substantially

transverse grooves are circumferentially offset relative to the fourth substantially

transverse grooves.

100. (Previously Presented) The tyre of claim 98, wherein the fourth

substantially transverse grooves bounding the inner blocks of the first circumferential

row are circumferentially offset relative to the fourth substantially transverse grooves

bounding the inner blocks of the second circumferential row, and

wherein the fourth substantially transverse grooves bounding the inner blocks of

the first circumferential row are circumferentially offset relative to the third substantially

transverse grooves.

101. (Previously Presented) The tyre of claim 98, wherein the fourth

substantially transverse grooves comprise:

fifth grooves inclined to the axial extension direction; and

sixth grooves substantially perpendicular to the circumferential extension

direction.

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102. (Previously Presented) The tyre of claim 101, wherein the fifth grooves are inclined to the axial extension direction by an angle included between 25° and 55°.

- 103. (Previously Presented) The tyre of claim 101, wherein the sixth grooves are inclined to the axial extension direction by an angle included between 5° and 20°.
- 104. (Previously Presented) The tyre of claim 101, wherein the fifth and sixth grooves are disposed in an alternating sequence along a respective circumferential row.
- 105. (Previously Presented) The tyre of claim 101, wherein the fifth grooves bounding the inner blocks of the first circumferential row are parallel to the fifth grooves bounding the inner blocks of the second circumferential row.
- 106. (Previously Presented) The tyre of claim 97, wherein the inner blocks comprise a substantially trapezoidal shape.
- 107. (Previously Presented) The tyre of claim 97, wherein the inner blocks comprise longitudinal sides inclined to the circumferential extension direction.
- 108. (Previously Presented) The tyre of claim 107, wherein the longitudinal sides are inclined to the circumferential extension direction by an angle included between 1° and 5°.

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109. (Previously Presented) The tyre of claim 97, wherein the third substantially

transverse grooves are inclined to the circumferential extension direction by an angle

included between 75° and 105°.

110. (Previously Presented) The tyre of claim 97, wherein the third substantially

transverse grooves of the second circumferential portion and the substantially

transverse grooves of the at least two shoulder blocks of the first circumferential portion

converge towards each other.

111. (Previously Presented) The tyre of claim 97, wherein the third substantially

transverse grooves of the second circumferential portion are substantially parallel to the

substantially transverse grooves of the at least two shoulder blocks of the first

circumferential portion.

112. (Previously Presented) The tyre of claim 97, wherein the third shoulder

blocks comprise different circumferential sizes.

113. (Previously Presented) The tyre of claim 97, wherein each third shoulder

block comprises:

a fifth series of sipes;

wherein the sipes of the fifth series comprise a sawtoothed profile, and

wherein the sipes of the fifth series are disposed according to an extension

substantially parallel to the third substantially transverse grooves.

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114. (Previously Presented) The tyre of claim 98, wherein the fourth

substantially transverse grooves comprise:

fifth grooves inclined to the axial extension direction; and

sixth grooves substantially perpendicular to the circumferential extension

direction.

wherein each inner block of the first circumferential row comprises:

a sixth series of sipes;

wherein the sipes of the sixth series comprise a sawtoothed profile, and

wherein the sipes of the sixth series are disposed parallel to each other

according to an extension oblique to the axial extension direction.

115. (Previously Presented) The tyre of claim 114, wherein the sipes of the sixth

series extend substantially parallel to the fifth grooves.

116. (Previously Presented) The tyre of claim 101, wherein each inner block of

the second circumferential row comprises:

a seventh series of sipes;

wherein the sipes of the seventh series comprise a sawtoothed profile, and

wherein the sipes of the seventh series are disposed parallel to each other

according to an extension oblique to the axial extension direction.

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117. (Previously Presented) The tyre of claim 116, wherein the sipes of the seventh series extend substantially parallel to the fifth grooves.

118. (Previously Presented) The tyre of claim 98, wherein a number of the shoulder blocks of the second circumferential portion is the same as a number of the inner blocks of the first circumferential row,

wherein the number of the shoulder blocks of the second circumferential portion is the same as a number of the inner blocks of the second circumferential row, and wherein the number of the shoulder blocks of the second circumferential portion is twice a number of elongated ridges of a first circumferential portion.

Claims 119-121 (Canceled).